

Mitchell Act Biological Opinion

Executive Summary

1-13-2017

This Opinion describes and assesses the effects of hatchery programs that were funded through the Mitchell Act in FY 2015 and that are proposed for funding using FY 2016 and future FY 2017 funding. It is also intended to serve as NMFS' consultation through 2025, as NMFS implements its new policy direction for the distribution of Mitchell Act funds.

When NMFS assesses a hatchery program, it does so with the knowledge that hatcheries can have positive and negative effects on salmon and steelhead survival and recovery and that the nature and level of effect is largely dependent on the circumstances and conditions that are unique to every location and every program. NMFS' assessment relies on best available scientific information (see Section 2.4 of the Opinion), and ultimately, the effects of hatchery programs are placed in the context of the numerous threats to the survival and recovery of salmon and steelhead in the Columbia River Basin.

In this case and for the hatchery programs described in the Proposed Action, there is a history of long-standing operations undergoing changes and reforms starting with the first ESA-listings of salmon and steelhead in the Columbia River Basin. NMFS first completed ESA consultation on Mitchell Act funded hatchery programs in 1999 and issued a jeopardy opinion with Reasonable and Prudent Alternatives. Since that time, and through subsequent Opinions, NMFS has called for, and the operators have carried out, important reform actions including: new monitoring of the status of salmon and steelhead populations; changes in hatchery production levels and hatchery fish releases into streams; implementation of weir technology to selectively remove excess hatchery-origin fish; and the use of alternative fish release locations. These measures, evaluated through new monitoring, have reduced the negative effects of these hatchery programs and the risks to natural populations of salmon and steelhead.

But these changes have not sufficiently minimized impacts on the affected ESA-listed salmon and steelhead species' and NMFS has realized through continued monitoring that there is more to do at these hatchery programs. Specifically, continued monitoring is showing that the number of hatchery fish on the spawning grounds is too high and continues to pose a genetic risk to natural populations. In addition, some broodstock practices require further adjustment to improve both fitness and abundance, and the potential of competition for limited food resources and habitat in freshwater, the estuary, and perhaps the Columbia River plume is cause for new scientific investigation and understanding.

NMFS has reviewed the hatchery programs that were funded through the Mitchell Act in FY 2015 and is proposing to fund continued hatchery production contingent on several site-specific measures to implement the preferred policy direction identified in the 2014 Final Environmental Impact Statement to Inform Columbia River Basin Hatchery Operations and the Funding of Mitchell Act Hatchery Programs (NMFS 2014). These measures are designed to address new monitoring and evaluation information and to minimize risks to ESA-listed species. NMFS also intends that these measures minimize impacts on Indian and non-Indian fisheries. The proposed measures build on hatchery reform measures implemented by the hatchery operators during the previous 5 to 10 years and are informed by the monitoring of those measures and new scientific information.

The measures or adjustments in hatchery operations, and the criteria for continued hatchery operation included in this Opinion are comprehensive and a sample of those adjustments and criteria are summarized below:

- 1) Elimination of steelhead broodstocks originating from outside the Columbia River (e.g., Puget Sound)
- 2) Development of broodstocks that are local to the hatchery and more compatible with local natural populations
- 3) Reductions in hatchery fish releases from specific hatchery programs that monitoring shows are responsible for hatchery straying
- 4) Status-quo or increased hatchery fish releases from hatchery programs that monitoring shows are not responsible for significant hatchery fish straying
- 5) New research and monitoring to determine whether juvenile hatchery fish are using limited food and habitat resources at the expense of or to the disadvantage of fish from natural populations
- 6) Specific limits on hatchery fish straying
- 7) New monitoring to better understand the status of Chinook salmon natural populations in the Coastal Stratum of the Lower Columbia River Chinook Salmon Evolutionarily Significant Unit
- 8) New monitoring to verify hatchery program compliance with the measures and criteria included in this Opinion

The Mitchell Act is one of NMFS' most important means of mitigating for development activities that have reduced the capacity of the Columbia River, and sub-basins of the Columbia River, to produce salmon and steelhead. The evolution of NMFS policy with respect to the distribution of Mitchell Act funds reflects the complexity of the issues and the multitude of stakeholders. NMFS has strived to update its policy for distributing Mitchell Act funds in ways that harmonize salmon and steelhead conservation, Indian reserved fishing rights, and sustainable recreation and non-tribal commercial fisheries. The implications of this update in NMFS policy were thoroughly explored and vetted in the Environmental Impact Statement completed by NMFS in

2014 and the outcome reflects a balancing of these interests in selecting the appropriate policy direction for annually distributing Mitchell Act funds.

It is NMFS' hope that the comprehensive approach to salmon and steelhead recovery in recovery plans is aggressively implemented because by itself these hatchery actions cannot address all of the factors limiting salmon and steelhead survival and recovery. However, the purpose of this action is to address the factors implicated by hatchery practices, and to distribute Mitchell Act funds in a way that minimizes impacts to threatened or endangered species and we ask all parties to keep these factors in mind when reading the following Opinion.